

1 GGAAGGTTTAAAGAACCGCGAAGCGCAGGGAAGGCTCCCGGACGGGTGGGGAAAGCGCGGTGCAGCGCGGGACAGGCACCTCGGGCTGGCCTAGGGATGTCGT
 -31 M S S
 121 CCTGGATAAGGTGGCATGGACCCGCCATGGCGCGGCTCTGGGGCTTCTGGCTGGTTGTGGGCTTCTGGAGGCGCGCTTTCGCCCTGTCCACGCTCCGCAAAATGCAGTGCCTCTCTCGGA
 -28 W I R W H G P A M A R L W G F C W L V V G F W R A A F A C P T S C K C S A S R I
 241 TCTGGTGAGCGACCCCTTCTCTCGGCATCGTGGCATTTCGGAGATTGGAGCCTAACAGTGPAGATCCTGAGAACATCACCGGAAATTTTCATCGCAAAACAGAGAAAGGTTAGAAATCATCA
 13 W C S D P S P G I V A F P R L E P N S V D P E N I T E I F I A N Q K R L E I I N
 361 ACGAAGATGATGTTGAAGCTTATGTGGACTGAGAAATCTGACAAATGTGGATTCTGGATTAAATAATTTGGCTCATAAAGCATTTCTGAAAAACAGCAACCTGCAGCACATCAATTTTA
 53 E D D V E A Y V G L R N L T I V D S G L K F V A H K A F L K N S N L Q H I N F T
 481 CCCGAAACAACTGACGAGTTTCTTAGGAACATTTCCGTCACCTTGACTGTCTGAATGATCCTGGTGGCAATCCATTACATGCTCCTGTGACATTTATGTGATCAAGACTCTCC
 93 R N K L T S L S R K H F R H L D L S E L I L V G N P F T C S C D I M W I K T L Q
 601 AAGAGCTAAATCCAGTCCAGACACTCAGGATTGTACTCCCTGAATGAAGCAGCAAGAAATATTCCTCGTGGCAACCTGCAGATACCCCAATTTGCGTTTGCCATCTGCAAAATCTGGCGG
 133 E A K S S P D T Q D L Y C L N E S S K N I P L A N L Q I P N C G L P S A N L A A
 721 CACCTAACCTCACTGTGGAGGAAGTCTATCACATTATCCTGTAGTGGCAGGTGATCCGGTCTCCTAATGATGTTGGGATGTTGGTAACCTGGTTTCCAAACATATGAATGAAA
 173 P N L T V E E G K S I T L S C S V A G D P V P N M Y W D V G N L Y S K H M N E T
 841 CAAGCCACACACAGGCTCCTTAAGGATACTAATCACTTCATCCGATGACAGTGGGAAACAGATCTCTGTGTGGCGGAAATCTTGTAGGAGAGATCAAGATTCTGTCAACCTCACATG
 213 S H T Q G S L R I T N I S S D D S G K Q I S C V A E N L V G E D Q D S V N L T V
 961 TGCATTTGCACCAACTATCACATTTCTCGAATCTCCAACCTCAGACCACCTGGTGGATTCATTCACCTGTGAAAGGCAACCCAAACAGCGCTTCAGTGGTTCTATAACGGGGCAA
 253 H F A P T I T F L E S P T S D H H W C I P F T V K G N P K P A L Q W F Y N G A I
 1081 TATTGAATGAGTCCAAATACATCTGTACTAAATACATGTTACCAATCACAGGAGTACCACGGCTCCAGCTGGATAATCCCACTCACATGAACAATGGGACTACACTCTAATAG
 293 L N E S K Y I C T K I H V T N H T E Y H G C L Q L D N P T H M N N G D Y T L I A
 1201 CCAAGATGATGGGAAGGATGAGAAACAGATTCTCTGCTCACTTCATGGGCTGGCTGGAATTGACGATGGTGCAAAACCCAAATTCCTGATGAATTTATGAAGATTATGGAACATG
 333 K N E Y G K D E K Q I S A H F M G W P G I D D G A N P N Y P D V I Y E D Y G T A
 1321 CAGCGAATGACATCGGGGACACCAGACAGAGTAATGAATCCCTTCCACAGACGTCACCTGATAAACCGGTCCGGAAACATCTCTCGGTCTATGCTGTGGTGGTGGTGGTCTGTGG
 373 A N D I G D T T N R S N E I P S T D V T D K T G R E H L S V Y A V V I A S V Y
 1441 TGGATTTTGCTTTTGGTAATGCTGTTTCTGCTTAAGTTGGCAAGACACTCCAAGTTTGGCATGAAAGGCTCCAGCCTCCGTTATCAGCAATGATGATGACTCTGCCAGCCACTCCATC
 413 G F C L L V M L F L L K L A R H S K F G M K G P A S V I S N D D S A S P L H H
 1561 ACATCTCCAAATGGGAGTAACACTCCATCTCTTCGGAAGGTGGCCAGATGCTGTCTATTATTGGAATGACCAAGATCCCTGTCAATTGAAATCCCAAGTACTTTGGCATCACCAACAGTC
 453 I S N G S N T P S S S E G G P D A V I I G M T K I P V I E N P Q Y F G I T N S Q

FIG. 1A

TC2250" 24F99650

1511 TTTTGTGTTTTCATAAGATCCCACTGGATGGTAGCTGAAATAAAGGAAAAGACAGAGAAAGGGGCTGTGGTGCTTGTGGTTGATGCTGCCCATGTAAGCTGGGACTCCTGGGACTGCT
436 F V L F H K I P L D G O
1631 GTTGGCTTATCCCGGGAAGTGCTGCTTATCTGGGGTTTTCTGGTAGATGTGGCGGTGTTTGGAGGCTGTACTATATGAAGCCTGCATATACTGTGAGCTGTGATTGGGGAACACCAATG
1751 CAGAGGTAACCTCTCAGGCAGCTAAGCAGCACCTCAAGAAAACATGTTAAATTAAATGCTTCTCTTCTTACAGTAGTTCAAATACAAAACCTGAAATGAAATCCCATTTGGATTGTACTTCTCT

FIG. 1C

FIG. 2A

1561 TACTTCGTCAGGGACACAACTGCCACAACCCGGACACCTATGTGCAGCAGCATTAGAGGAGAGACATCGTGGTGAAGCGAGAACTGGGTGAGGAGCCCTTTGGAAAGGTCTTCCTCGGCC
 485 Y F R Q G H N C H K K P D T Y V Q H I K R R D I V L K R E L G E G A F G K V F L A
 1681 GAGTGTACAACCTCAGCCCGACCAAGGACAAGATGCTTGTGGCTGTGAAGCCCTGGAAGATCCACCCCTGGCTGCCCGAAGGATTTCCAGAGGGAGCGGAGCTGCTCACCACCTG
 525 E C Y N L S P T K D K M L V A V K A L K D P T L A A R K D F Q R E A E L L T N L
 1801 CAGCATGAGCACATTGTCAAAGTTCTATGGAGTGTGCGGCGATGCGGACCCCTCATCATGGTCTTTGAATACATGAAGCATGGAGACCTGAATAGTTCTCAGGGGCCCATGGGCCAGAT
 565 Q H E H I V K F Y G V C G D G D P L I M V F E Y M K H G D L N K F L R A H G P D
 1921 GCAATGATCCTTGTGATGGACAGCCAGCGCAAGGTGAGCTGGGCTCTCCCAAATGCTCCACATTCGCCAGTCAGATCGCCTCGGGTATGGTGTACCTGGCCTCCAGCACTTT
 605 A M I L V D G Q P R Q A K G E L G L S Q M L H I A S Q I A S G M V Y L A S Q H F
 2041 GTGCACCGAGACCTGCGCACCGAGAACTGCTGTGGAGCGAATCTGCTAGTGAAGATTGGGACTTGGGCATGTCCAGAGATGCTACAGCAGGATTATTACAGGCTCTTTAATCCA
 645 V H R D L A T R N C L V G A N L L V K I G D F G M S R D V Y S T D Y Y R {L F N P
 2161 TCTGGAATGATTTTGTATATGCTGTGAGTGGGAGACACACCATGCTCCCAATTCGCTGGATGCTCTGAAAGCATCATGTACCGGAAGTTCACTACAGAGAGTGTATGGAGC
 685 S G N D F C I W C E } V G G H T M L P I R W M P P E S I M Y R K F T T E S D V W S
 2281 TTCGGGGTGATCCTCTGGGAGATCTTCACCTATGGAAGCAGCGCATGGTTCCAACTCTCAAACACCGAGGTCTATTGAGTGCAATTACCCGAAGGTCTGTGTTTTCGAGCGGCCCGAGCTCTGC
 725 F G V I L W E I F T Y G K Q P W F Q L S N T E V I E C I T Q G R V L E R P R V C
 2401 CCCAAGAGGTGTACGATGTCTGCTGGGTGCTGGCAGAGGGAAACACAGCAGCGGTGGAACATCAAGGAGATCTACAAAATCCTCCATGCTTTGGGGAAGGCCACCCCAATCTACCTG
 765 P K E V Y D V M L G C W Q R E P Q Q R L N I K E I Y K I L H A L G K A T P I Y L
 2521 GACATTCCTTGGCTAGTGTGGTGTGTCATGAAATTCATCTCTCTGCTGCTCCTCTCCTCCCTTCACATCTCCTTCACCTCACAACCTCCTTCCTTCATCCTTGACTGGAAGCGAACATC
 805 D I L G O
 2641 TTCATATAAACTCAAGTGCCTGCTACACATACACACTGAATAAAGGAAAAAAGAAAAAAGAAAAAAGAAAAAAGCGG

FIG. 2B

TO2250" 24793650

1600 TGGTCTTTTCAACATAGACAATCATGGGATATTAACTTGAAGGACAATAGAGATCATCTAGTCCCATCAACTCACTATATATATGAGGAACCTGAGGTCCAGAGTGGGAACTGTCT
498 W V F S N I D N H G I L N L K D N R D H L V P S T H Y I Y E E P E V Q S G E V S
1720 TACCCAGGTCAATGGTTTCAGAGAAATTATGTGAAATCCAAATAGCCTTCCGGACATTCCAAGCCTCTTAACCATGGCATCTATGTTGAGGATGTCAAATGTTTATTTTCAGCAAGGA
538 Y P R S H G F R E I M L N P I S L P G H S K P L N H G I Y V E D V N V Y F S K G
1840 CGTCATGGCTTTTAAAAAC
578 R H G F O

FIG. 2C

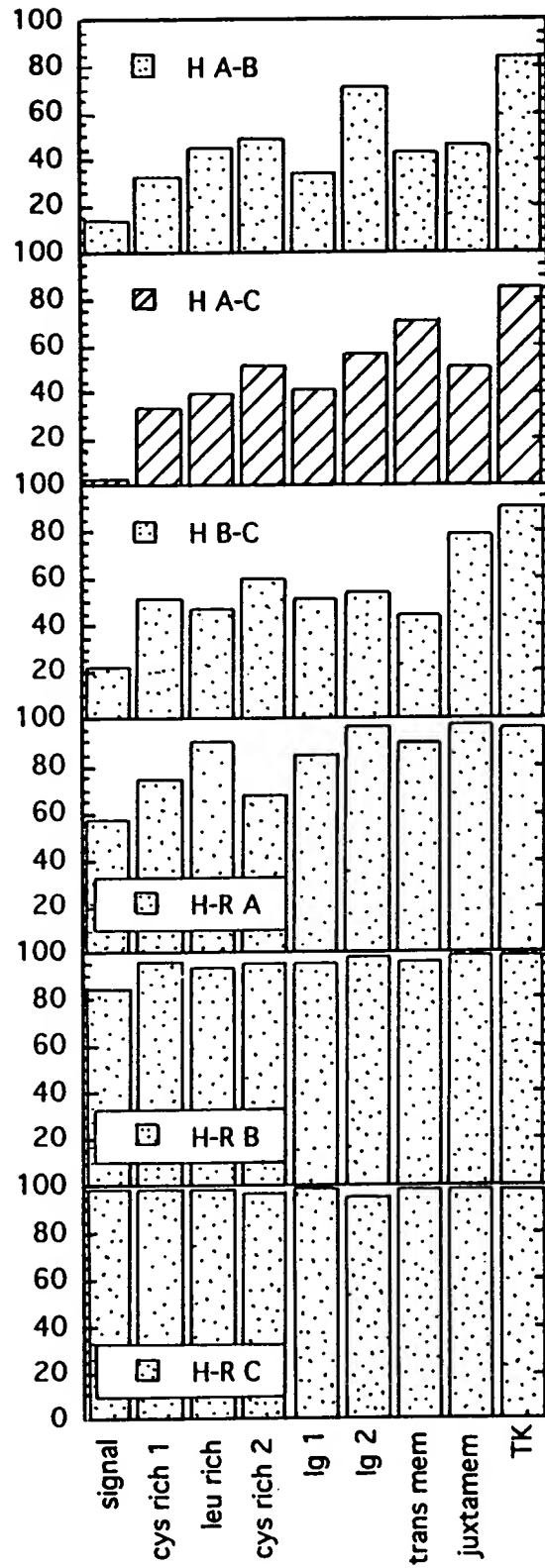


FIG. 3

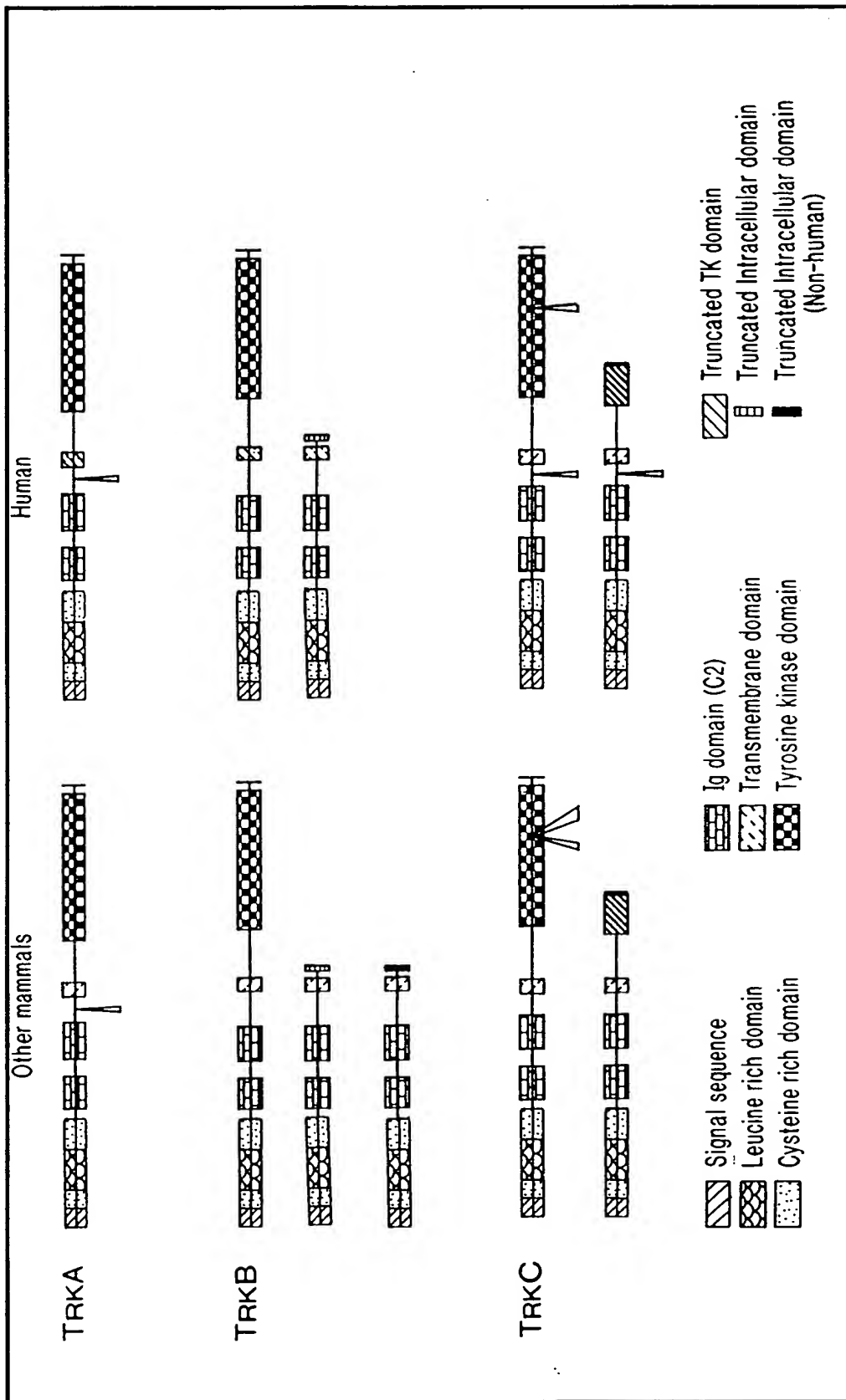


FIG. 4

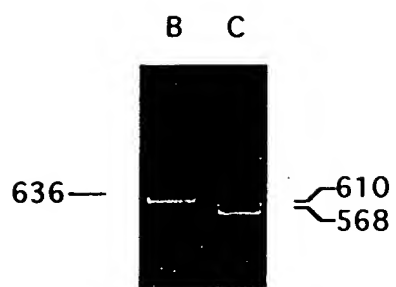


FIG. 5

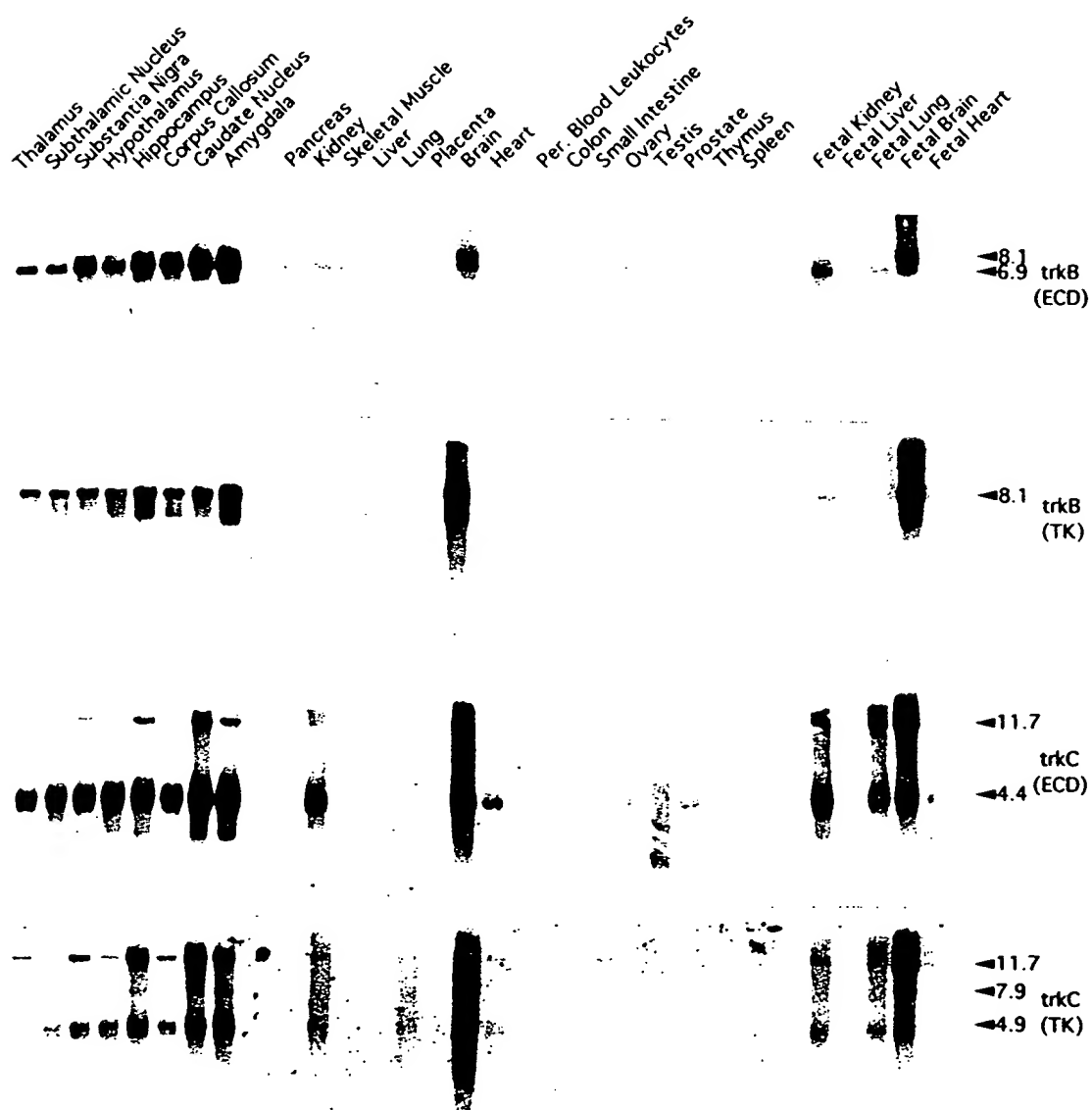


FIG. 6



FIG. 7A



FIG. 7B



FIG. 7C



FIG. 7D



FIG. 7E





FIG. 8A

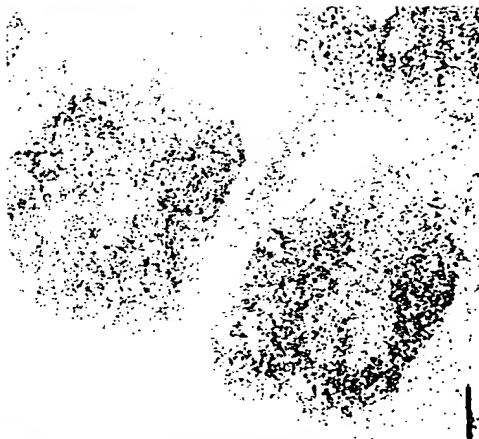


FIG. 8B

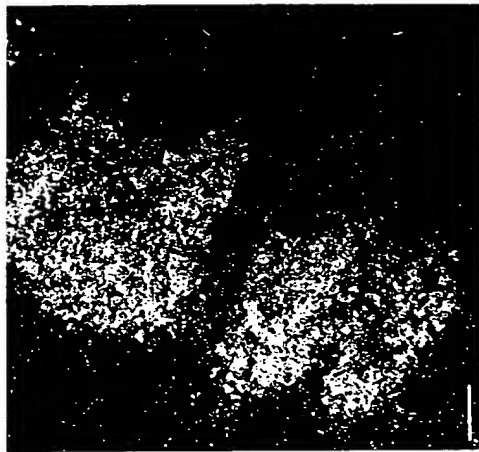


FIG. 8C



FIG. 8D



FIG. 8E

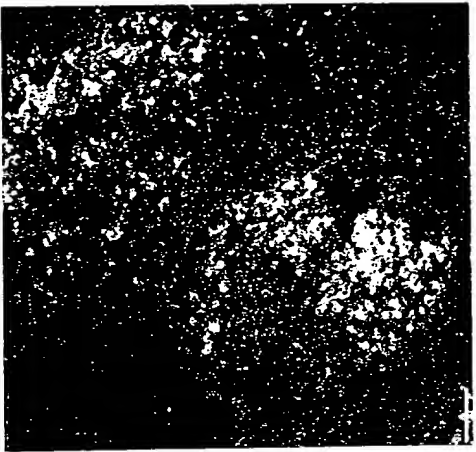


FIG. 8F

09966147 .092701

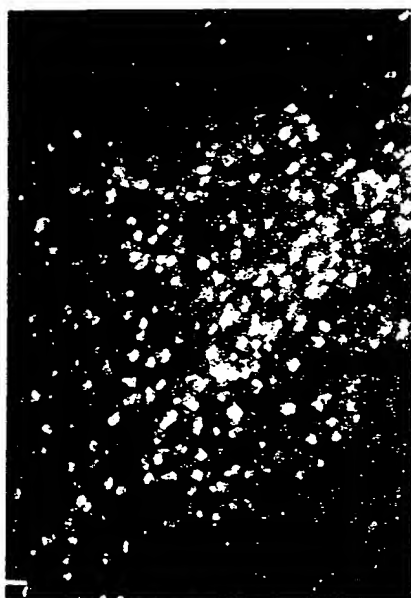


FIG. 9A

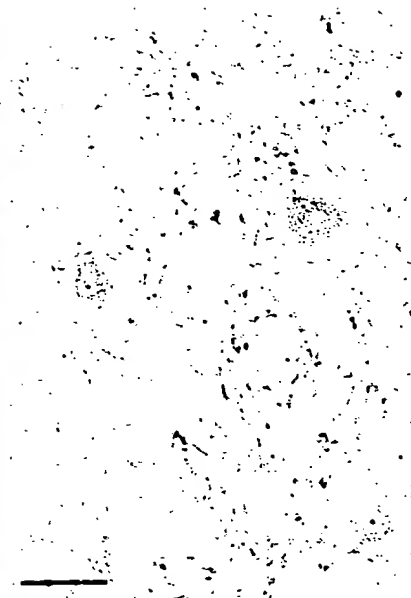


FIG. 9B

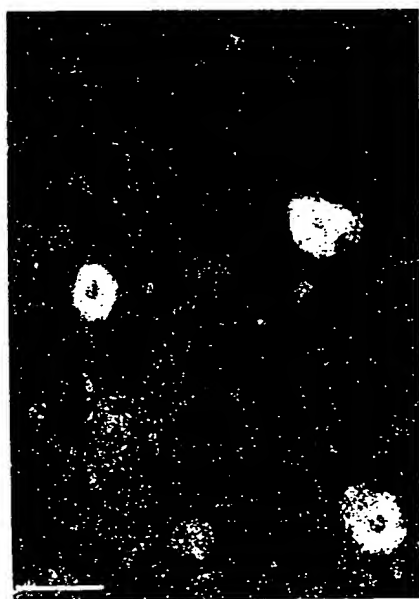


FIG. 9C



FIG. 9D

09966147-092701



FIG. 9E

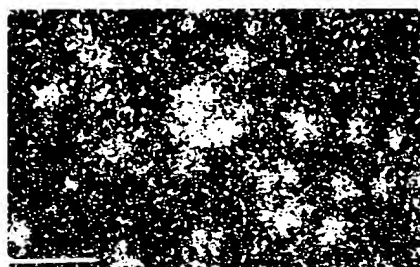
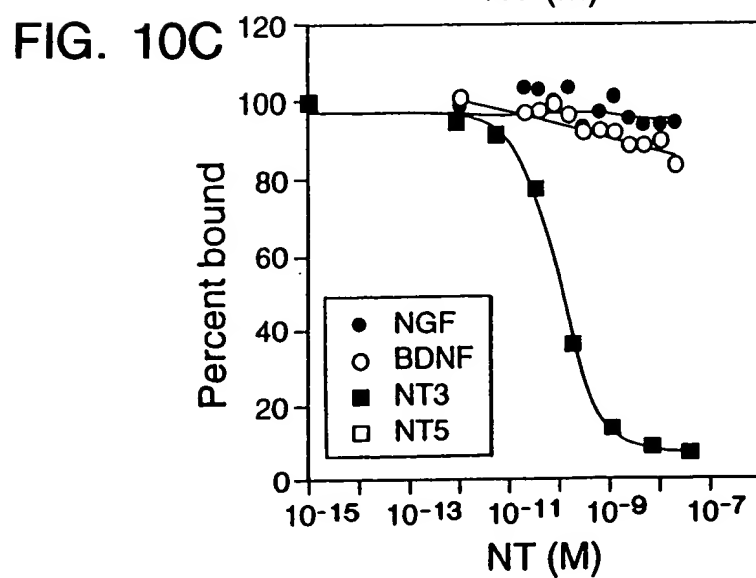
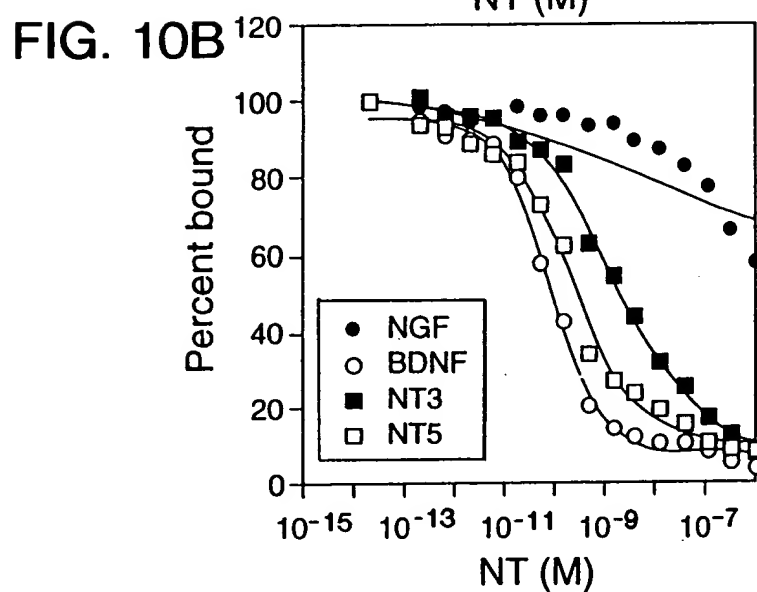
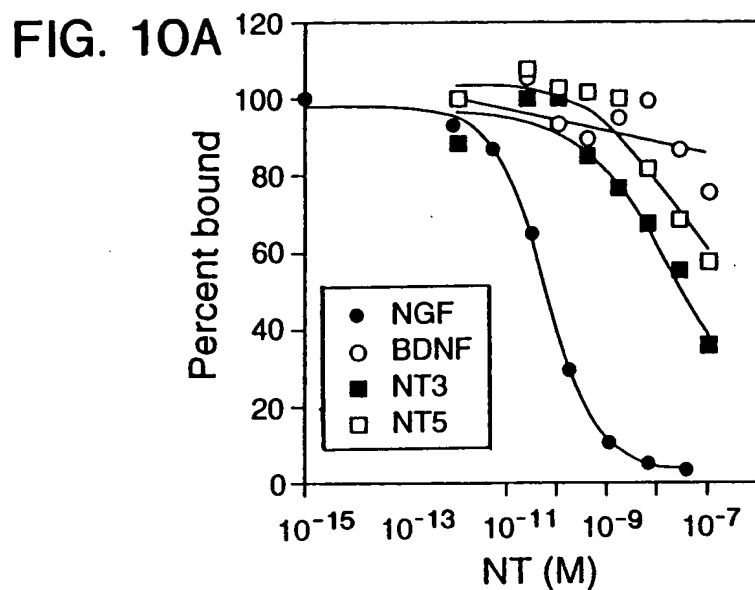


FIG. 9G

FIG. 9F



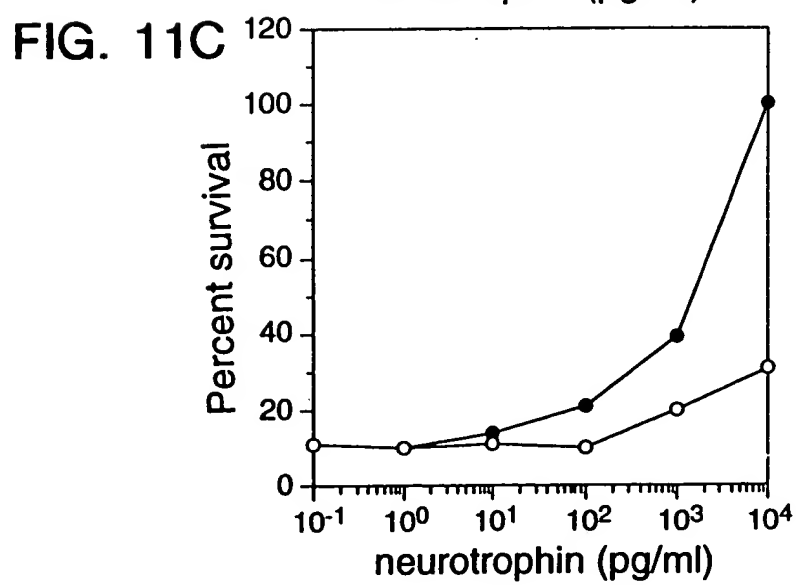
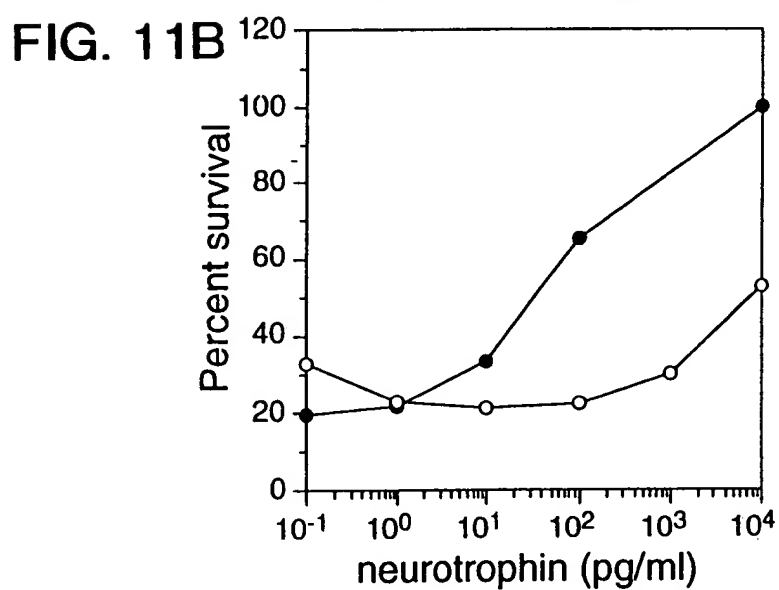
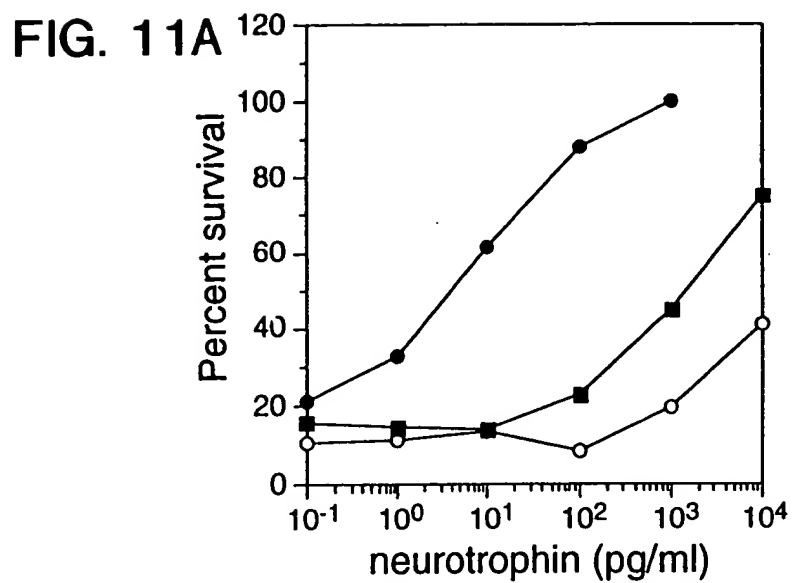
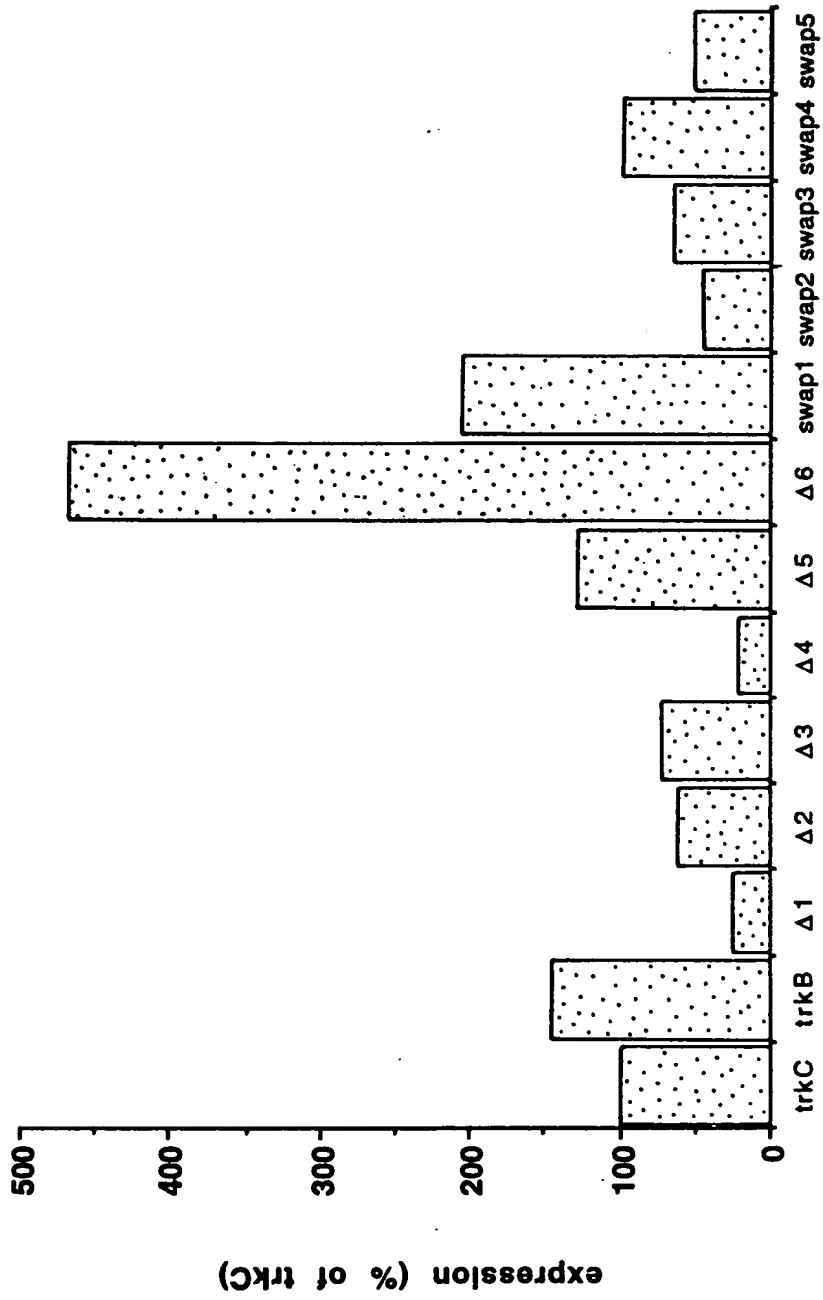




FIG. 12



receptor variant

FIG. 13

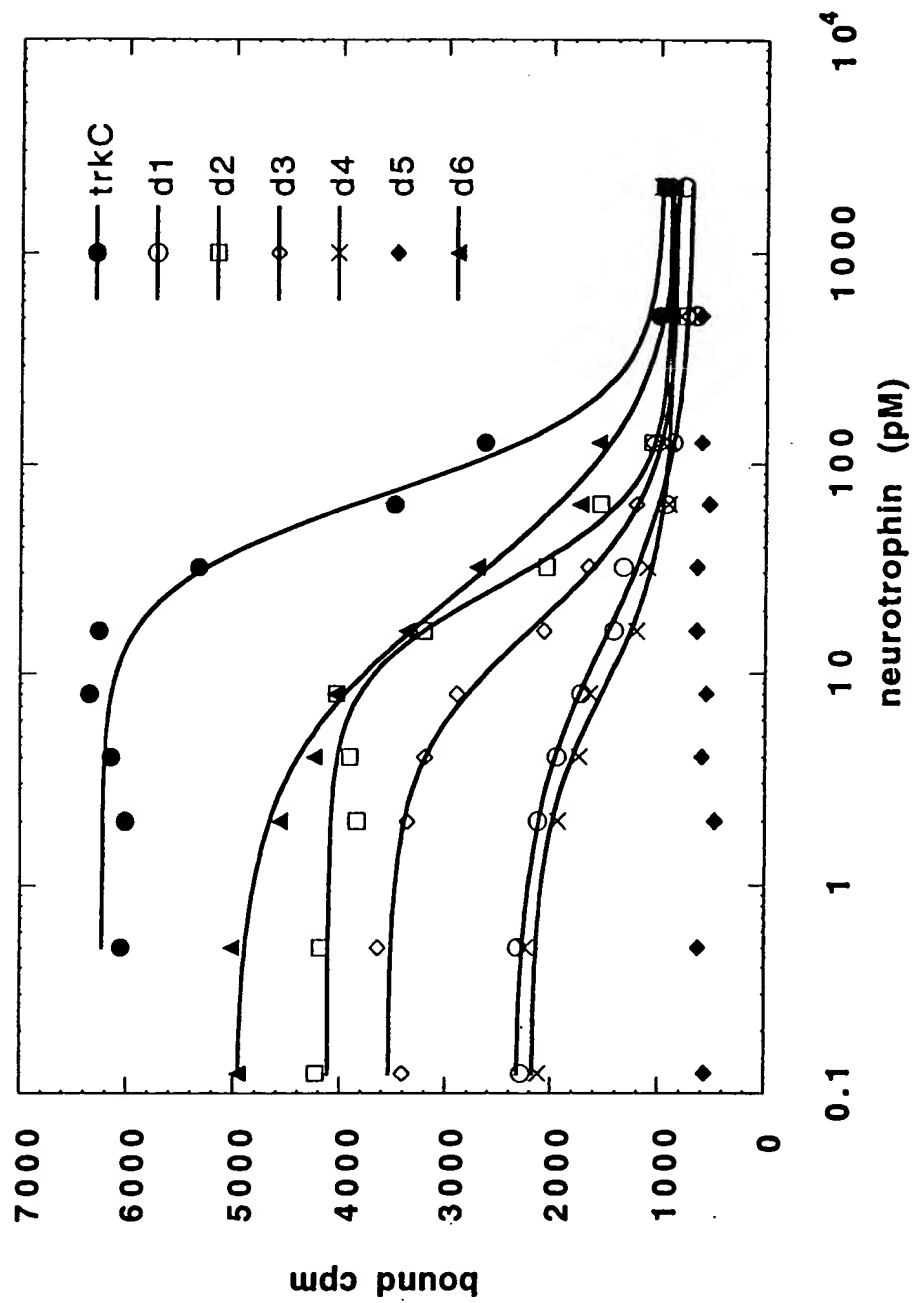


FIG. 14A

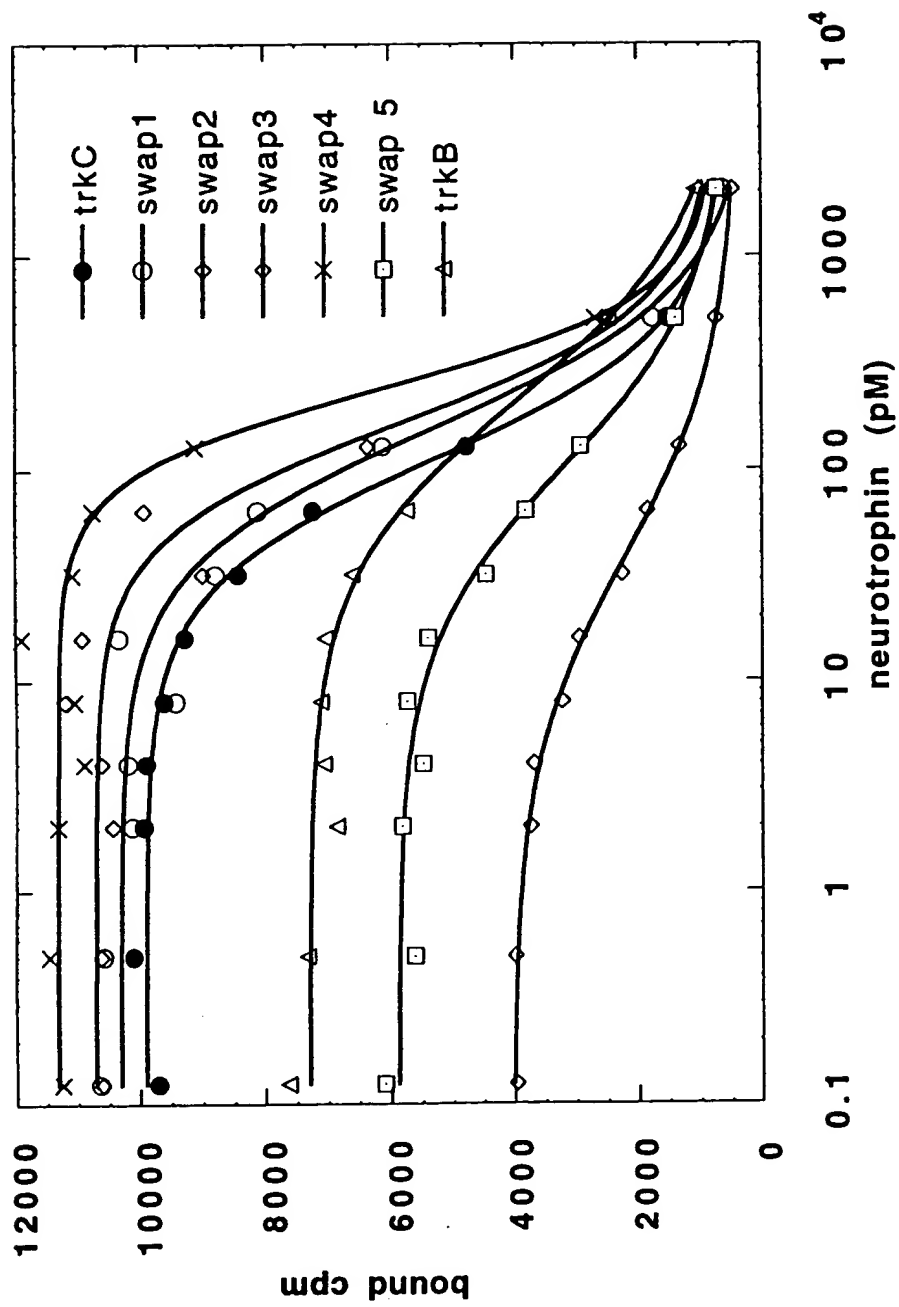


FIG. 14B

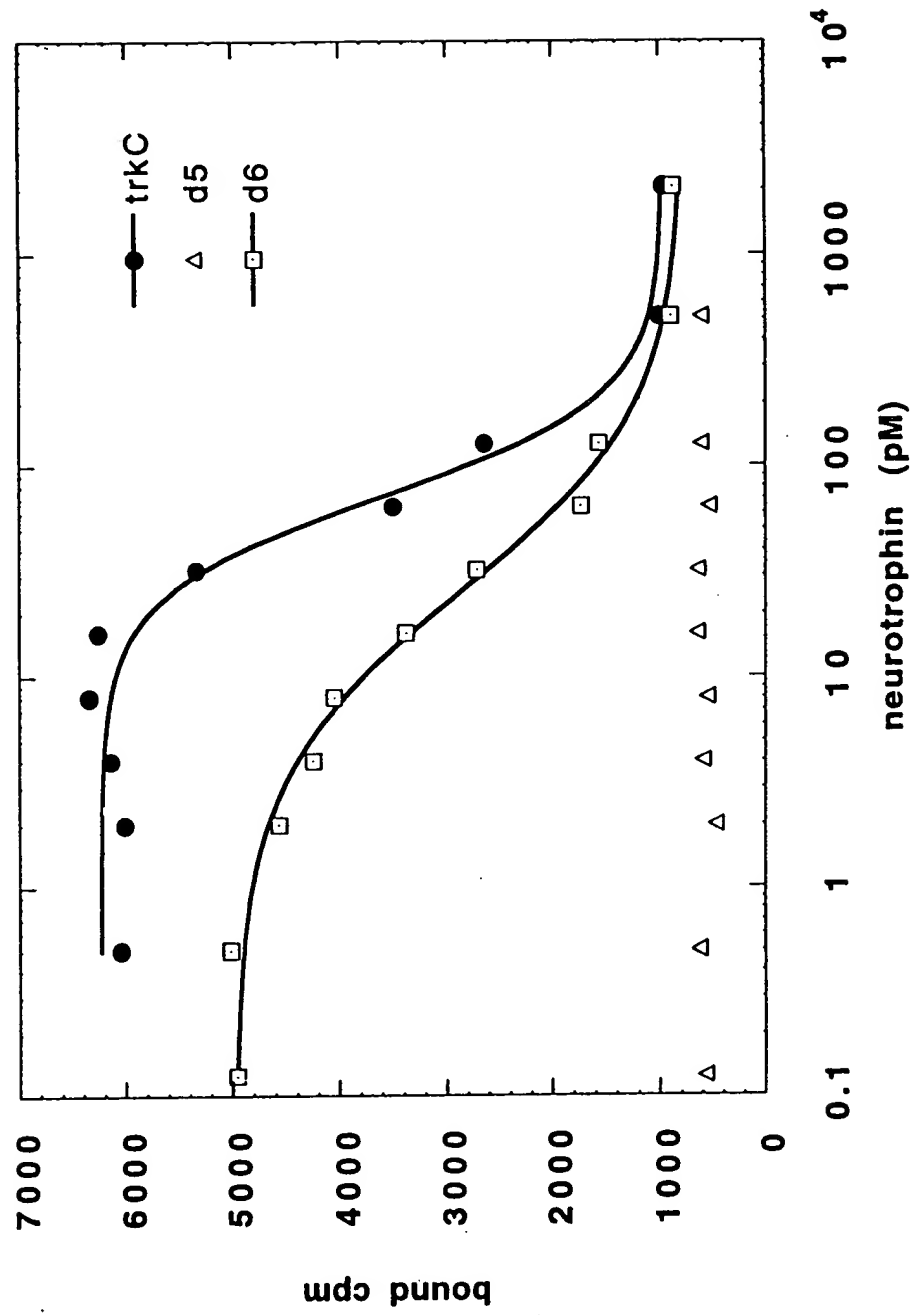


FIG. 14C

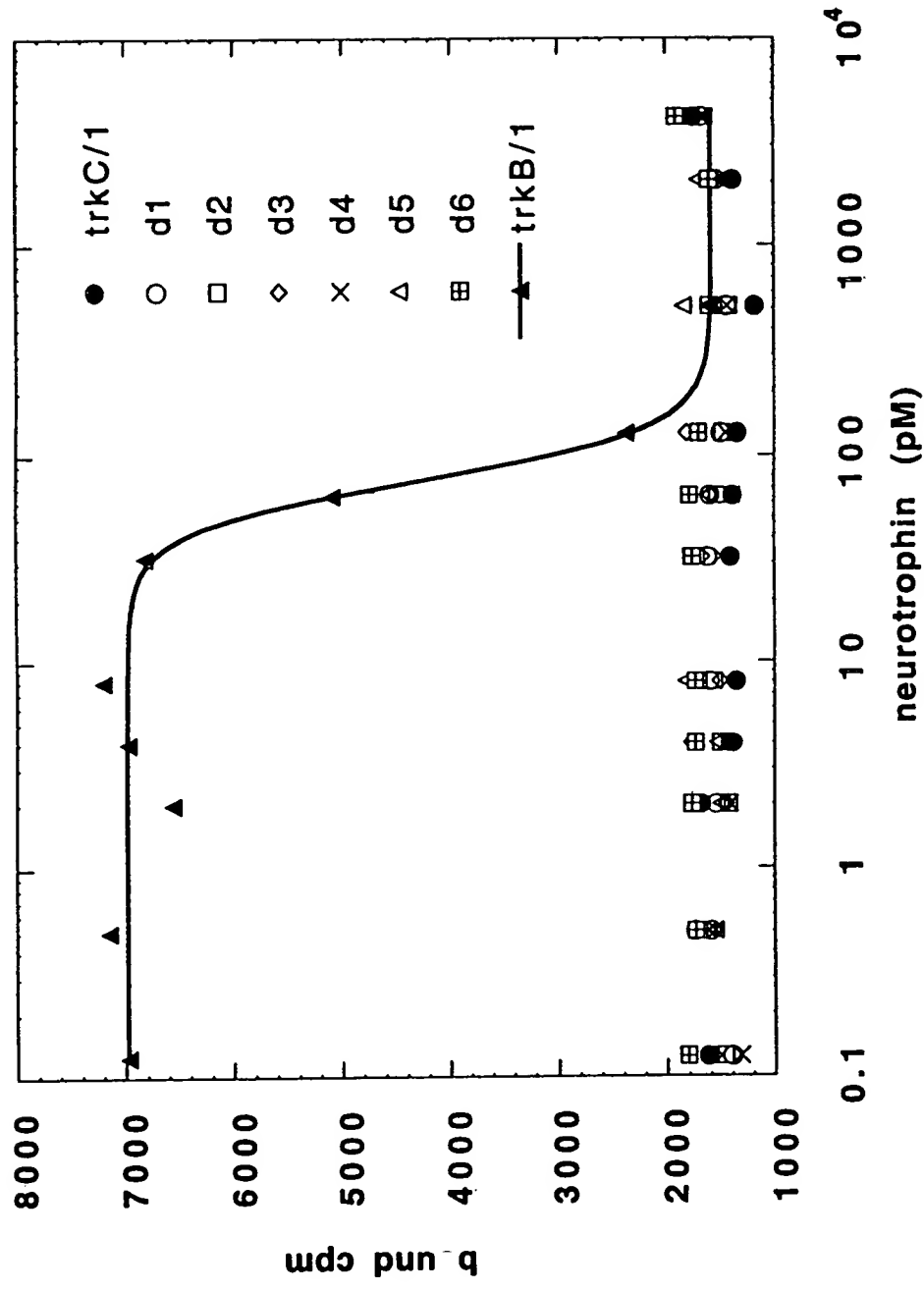


FIG. 15A

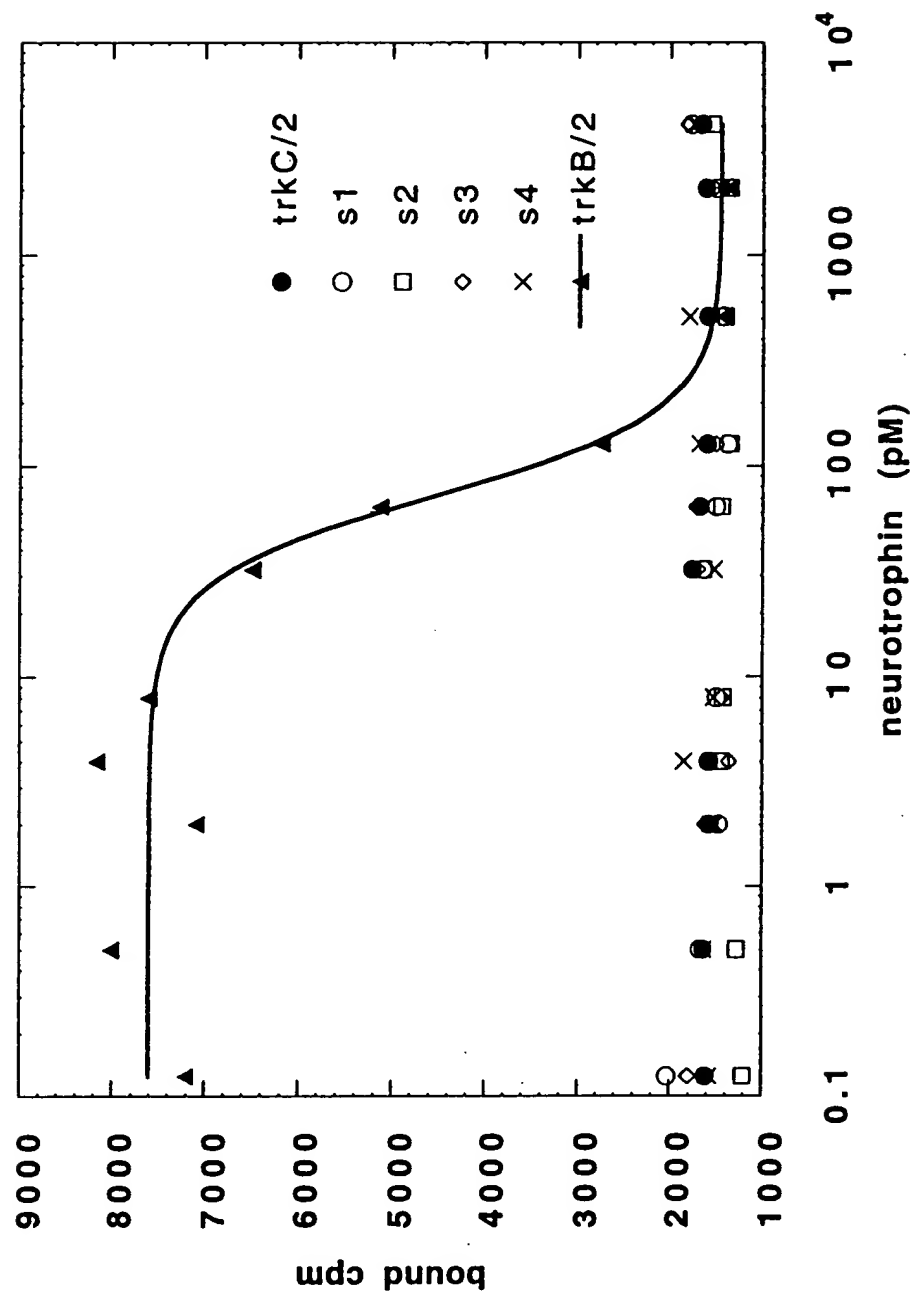


FIG. 15B

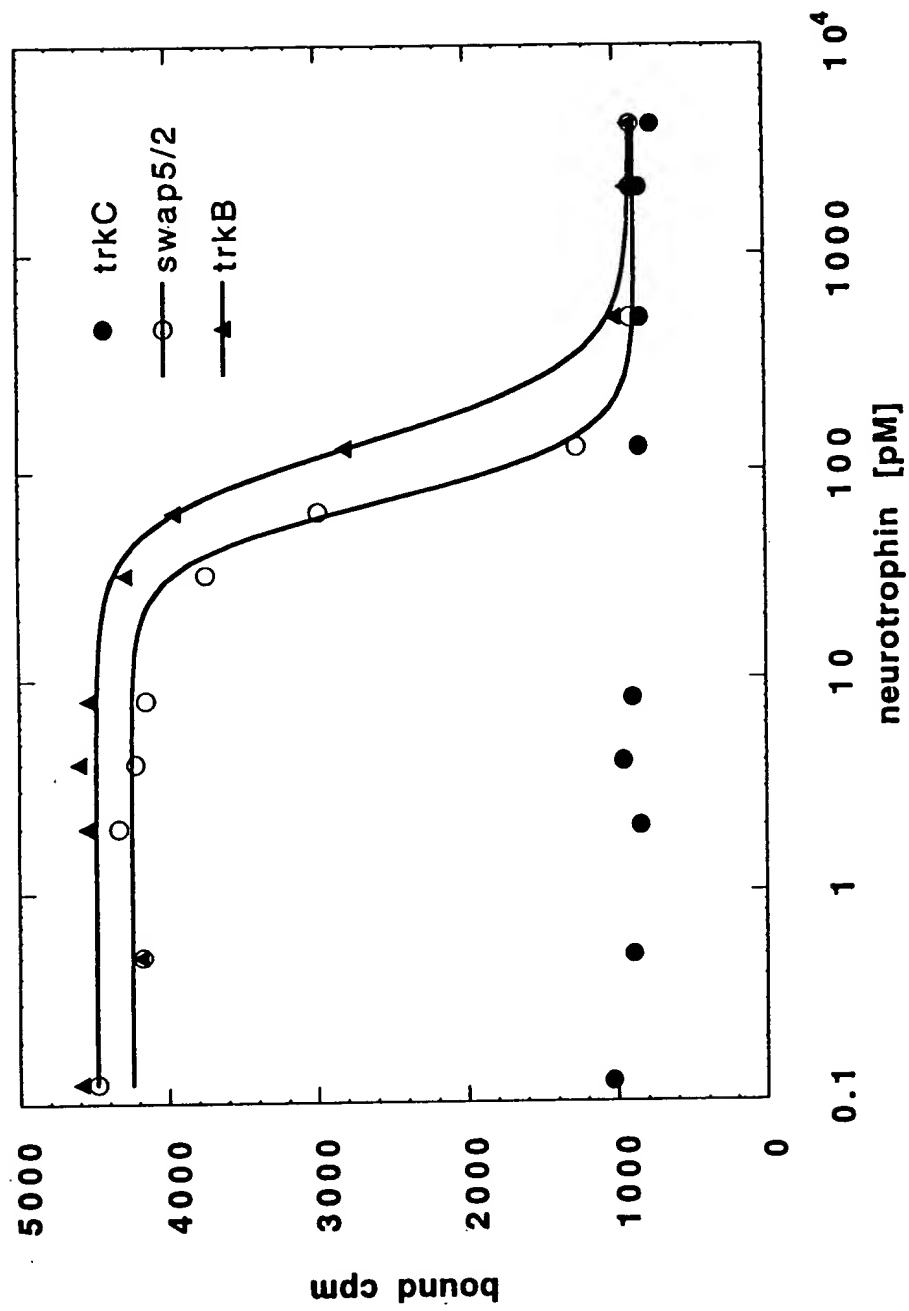


FIG. 15C

		Signal	
trkA	1	HLRGRRGOLGWHSWAAGPGLLAWLILAS - - - - AGAAPCPDACCP	
trkB	1	- - - - MSSWIRWHPAMARLWGFCLVGVFW - - - - RAAFAACPTS - CK	
trkC	1	- - - - MDVSL - - - CPAKCSFWRI - FLGSVWLDYVGSVLACPAN - CV	
		Cysteine Rich I	
		HGSSGLRCTR - DGALDSLHHLPG - - - - - AENLTIELYIENQQ	
		CSASRIWCSDPSPGIVAFPRLEPNVSD - - - - - PENITEIFIANOK	
		CSKTEINCRRPDDGNL - FPLLEGODSGNSNGNANINITDISRNITSIHIENWR	
		Leucine Rich	
trkA	78	HLOHLELRDLRGLGELRNLTIVKSGLRFVAPDAFHFTPRLSRLNLSF	
trkB	78	RLEIINEDDVEAYVGLRNLTIVDSGLKFVAHKAFLKNSNLOHINFTR	
trkC	90	SLHTLNAYDMELYTGLOKLTIKNSGLRSIOPRAFAKNPHLRYINLSS	
		Cysteine Rich II	
		NALESLSWKTVOGLSLQELVLSGNPLHCSCALRWLORWEEEGLGGVPEQKLOC	
		NKLTSLSRKHFRHLDLSELILVGNPFTCSCDIMWIKTLOE - AKSSPDITQDLYC	
		NRLTTLWOLFOTLSLRELOLEQNFNCSCDIRWMOLWEOEGEAKLNSQNLVC	
trkA	178	HGQG - - - PLAHMPNASCQVPTLKVOVPNASVDYGGDDVLLRCQVEGR	
trkB	177	LNESKNIPPLANLOIPNCGLPNSANLAAPNLTVEEGKSIITLSCSVAGD	
trkC	180	INADGSOLPLFRMNI SQCDLPEISVSHVNLTVREGDNNAVITCNGSGS	
		Immunoglobulin I	
		GLEQAGWILTELEQSAIVMKSS - - - GGLPSLGLTLANVTSDLNRKNLTCWAEND	
		PVPNMYWDVGNLVSKHMMNET - - - SHTOG - SLRITNISSDDSGKQISCVAENL	
		PLPDVDWIVITGLOSINTHOTNLNWTNVHAINLTLVNVTSEDNMGFTLTICIAENV	

FIG. 16A

<i>trkA</i>	271	VGRAEVSVQVNVSFPA	SQ - LHTAVEMHHWC	IPFSVDGOPAPSLRWL
<i>trkB</i>	272	VGEDODSVNLT	VHFAPTITFL	ESPTSDHHWCIPFTVKG
<i>trkC</i>	290	VGMSNASVAL	TVYYP	PRVVSLEELRLEHCIEFVVRGNPPPTLHWL
		-----Immunoglobulin II-----		
		FNGSVLNETS	FI	FTFLEPAANETVRHGCLRLNQPT
		YNGAILNESK	YICTKI	H - - VTNHTEYHGCLQLDNPT
		HNGOPLRESKI	IIVVEYY - -	OEGEIS - EGCLLFNKP
		THYNNGN	YTLIAKNPLGT	
<i>trkA</i>	370	ASASIMAAFM	- - - - -	DNPF - - - - EF - NPEDPI
<i>trkB</i>	370	DEKOISAHFM	GWPGIDDG	ANPNYPDVIYEDYGTA
<i>trkC</i>	387	ANQTINGHFL	- - - - -	KEPFEST - DMF - ILFDEV
		-----Transmembrane-----		
		- TSGDPVEKKDET	- - -	PFGVSVAVGLAVFACLF
		IPSTDVTDK	TGREHLSVYA	VVVIASVVGF - C - LLVMLFLL - -
		- PPITVT	THKPEED - -	TFGVSI
		AVGLAA	AFACVLLV	LVLFV
		-----Juxtamembrane-----		
<i>trkA</i>	448	RP - AVLAP	EDGLAMSLHFM	TLGGSSLSPTIE - GKGSGLQG - - -
<i>trkB</i>	468	GPA	SVISNDDDSASPLHHIS	NGSNTPSSSEGGPD
<i>trkC</i>	468	GPVAVISG	EEDSASPLHHIN	HGITTTPSSLDAGP

		NPOYF - - - - -	SDACVHHIKRR	DIVLKWELGEGAFGKVFLA
		NPOYFGITNSOLK	PPDTFVQHIKRR	HNIVLKRRELGEGAFGKVFLA
		NPOYFROGHNC	HKPPDTYVQHIKRR	RDIVLKRRELGEGAFGKVFLA

FIG. 16B

<i>trkA</i>	532	KMLVAVKALKEASESARODFOREAEELLTMLQHQHIVRFFFGVCTEGRP
<i>trkB</i>	566	KILVAVKTLKDASDNARKDFHREAEELLTNLQHEHIVKFYGVCEGDP
<i>trkC</i>	566	KMLVAVKALKDPTLAARKDFOREAEELLTNLQHEHIVKFYGVCGDGP
		Tyrosine Kinase
		LLMVFEYMRHGD LNRFLRSHGPD AKLLAGGEDV - APGPLGLGQLLAVASOVAA
		LIMVFEYMKKHGDLNKKFLRAHGPD AVLMAEGNPP - - TELTQSOMLHIAQQIAA
		LIMVFEYMKKHGDLNKKFLRAHGPD AMILVDGOPROAKGELGLSOMLHIASOIAS
<i>trkA</i>	631	GMVYLAGLHFVHRDLATRNCCLVGQGLVVKIGDFGMSRDIYSTDYR -
<i>trkB</i>	663	GMVYLASOHFVHRDLATRNCCLVGEMLLVKIGDFGMSRDVYSTDYR -
<i>trkC</i>	666	GMVYLASOHFVHRDLATRNCCLVGANLLVKIGDFGMSRDVYSTDYRL
		-----VGGRTMLPIRWMPPESILYRKFTTESDVWSFGVVLWEIFT
		-----VGGHTMLPIRWMPPESIMYRKFTTESDVWSLGVVLWEIFT
		FNPSGNDFCIWCEVGGHTMLPIRWMPPESIMYRKFTTESDVWSFGVILWEIFT
<i>trkA</i>	717	YGKOPWYQLSNTEAIDCITOGRELERPRACPPPEVYAIMRGCWOREPO
<i>trkB</i>	749	YGKOPWYQLSNNEVIECITOGRVLQRPRTCPOEVYELMLGCMWOREPH
<i>trkC</i>	766	YGKOPWFQLSNTEVIECITOGRVLERPRVCPKEVYDVMLGCMWOREPO
		ORHSIKDVHARLQALAQAPPVYLDVLG
		MRKNIKGIHTLLONLAKASPVYLDILG
		ORLNIKEIYKILHALGKATPIYLDILG

FIG. 16C

1042260 44799660

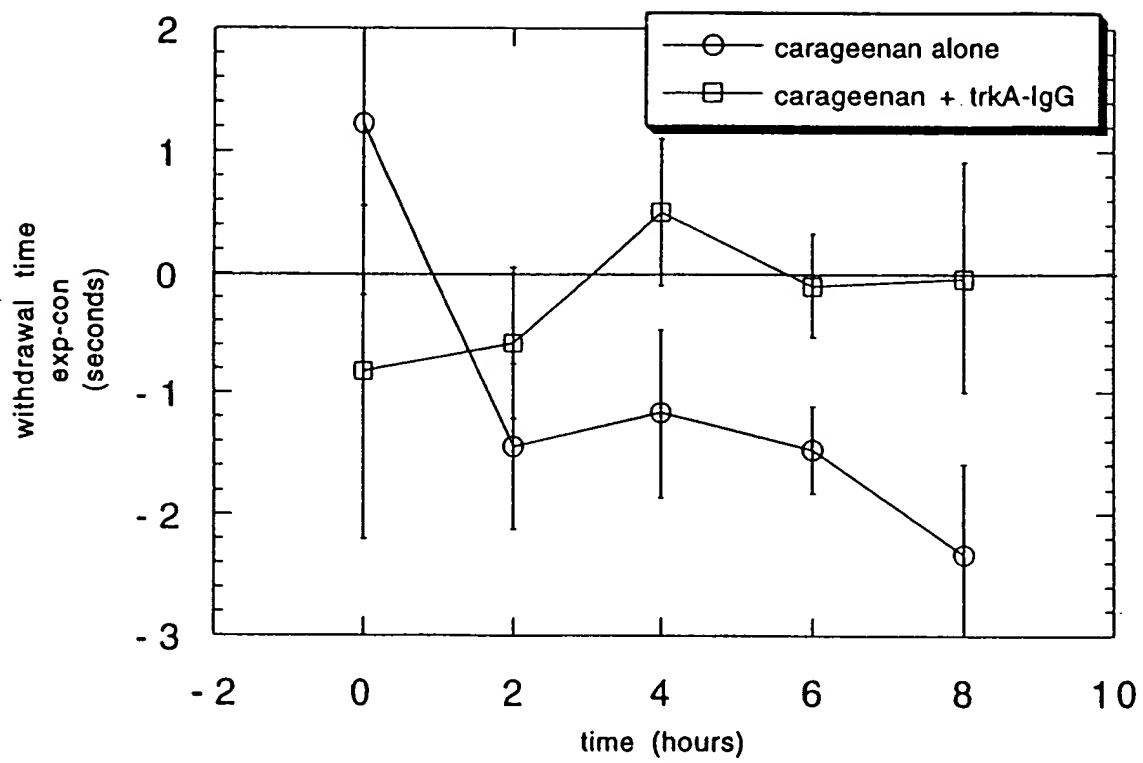


FIG. 17

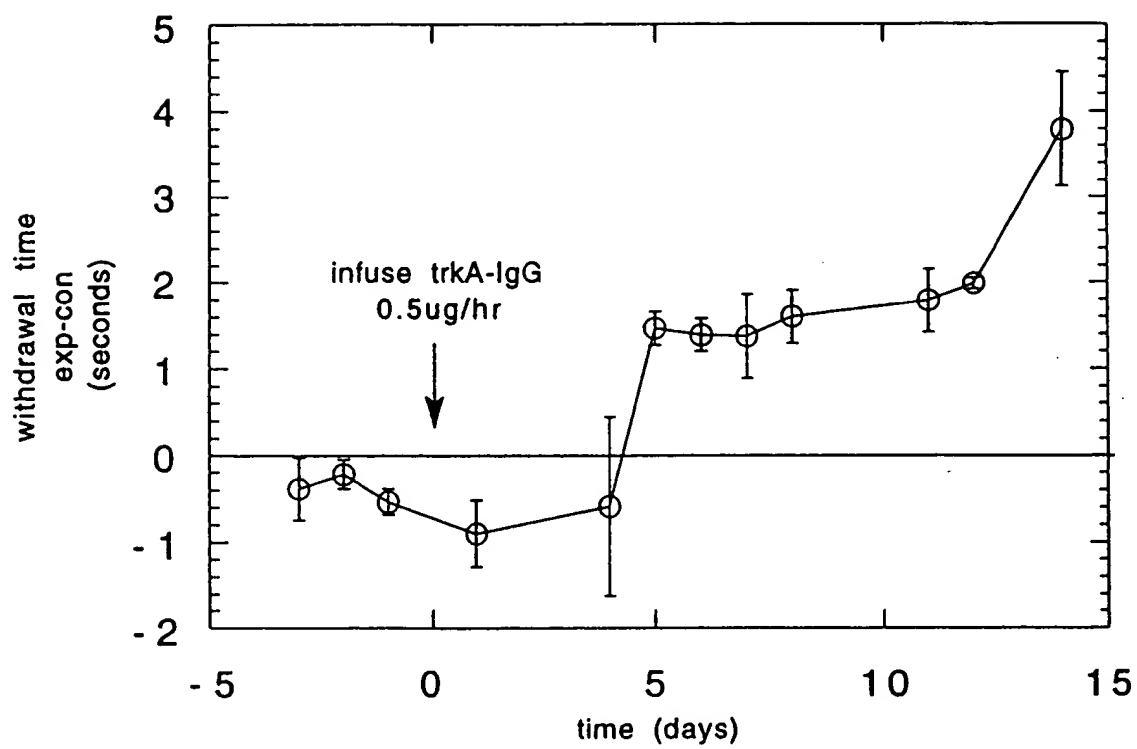


FIG. 18